

IN THE CLAIMS

Applicant hereby presents the claims, their status in the application, and amendments thereto as indicated:

1. (Previously Presented) A lens system for reconfiguring the cornea and holding the reconfigured cornea during a laser treatment, said system comprising:

a lens member having an anterior surface and formed with a contact surface opposed to said anterior surface;

a skirt for forming a seal against the exterior surface of the eye, said skirt surrounding said contact surface and projecting outwardly therefrom to define a recessed chamber therebetween, said recessed chamber having an opening;

a passageway positioned substantially adjacent to said contact surface, said passageway in fluid communication with said recessed chamber; and

a suction device in fluid communication with said passageway for creating a partial vacuum in said recessed chamber to reconfigure the cornea against said contact surface when said skirt is placed in contact with said exterior surface of the eye.

2. – 24. (Canceled)

25. (Currently Amended) A device for reconfiguring the surface of a cornea, said device comprising:

a transparent optical element having a first surface and a second surface, wherein said first surface is shaped to reconfigure the surface of the cornea;

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening; and

a passageway positioned adjacent to said opening, said passageway in fluid communication with said recessed chamber;

wherein said passageway is adapted for connection in fluid communication with a suction device for creating a partial vacuum in said recessed chamber.

26. (Canceled)

27. (Previously Presented) A device as recited in claim 25, wherein said skirt is cylindrical.

28. (Previously Presented) A device as recited in claim 25, wherein said skirt extends outwardly from said first surface.

29. (Currently Amended) ~~A device as recited in claim 25;~~ A device for reconfiguring the surface of a cornea, said device comprising:

a transparent optical element having a first surface and a second surface;
a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening, wherein said skirt has a sealing surface extending into said recessed chamber, wherein said sealing surface is formed of a soft, medical grade plastic; and

a passageway positioned adjacent to said opening, said passageway in fluid communication with said recessed chamber;

wherein said passageway is adapted for connection in fluid communication with a suction device for creating a partial vacuum in said recessed chamber.

30. (Currently Amended) ~~A device as recited in claim 25;~~ A device for reconfiguring the surface of a cornea, said device comprising:

a transparent optical element having a first surface and a second surface,
wherein said first surface is substantially flat;

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening; and

a passageway positioned adjacent to said opening, said passageway in fluid communication with said recessed chamber;

wherein said passageway is adapted for connection in fluid communication with a suction device for creating a partial vacuum in said recessed chamber.

31. (Previously Presented) A device as recited in claim 25, wherein said second surface is substantially flat.

32. (Previously Presented) A device as recited in claim 25, wherein said first surface is curved.

33. (Canceled)

34. (Currently Amended) ~~A device as recited in claim 25;~~ A device for reconfiguring the surface of a cornea, said device comprising:

a transparent optical element having a first surface and a second surface, wherein said first surface is shaped to introduce less spherical aberration to a laser beam as said laser beam passes into the reconfigured cornea than is introduced into an identical laser beam passing into a cornea that is not reconfigured;

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening; and

a passageway positioned adjacent to said opening, said passageway in fluid communication with said recessed chamber;

wherein said passageway is adapted for connection in fluid communication with a suction device for creating a partial vacuum in said recessed chamber.

35. (Currently Amended) ~~A device as recited in claim 25;~~ A device for reconfiguring the surface of a cornea, said device comprising:

a transparent optical element having a first surface and a second surface,
wherein said second surface and first surface are substantially parallel;
a skirt adjoining said optical element thereby forming a recessed chamber
around said first surface, said recessed chamber having an opening; and
a passageway positioned adjacent to said opening, said passageway in fluid
communication with said recessed chamber;
wherein said passageway is adapted for connection in fluid communication with a
suction device for creating a partial vacuum in said recessed chamber.

36. (Currently Amended) ~~A device as recited in claim 25, further comprising A~~
device for reconfiguring the surface of a cornea, said device comprising:

a transparent optical element having a first surface and a second surface;
a skirt adjoining said optical element thereby forming a recessed chamber
around said first surface, said recessed chamber having an opening;
an extension connected to said skirt; and
a passageway positioned adjacent to said opening, said passageway in fluid
communication with said recessed chamber;
wherein said passageway is adapted for connection in fluid communication with a
suction device for creating a partial vacuum in said recessed chamber.

37. (Currently Amended) A device as recited in claim ~~[[34]]~~ 37, wherein said
extension has a sealing surface with a concave curvature.

38. (Currently Amended) A lens system for reconfiguring a cornea and holding
the reconfigured cornea during a laser treatment, said system comprising:

a corneal surface reconfiguring device comprising
a transparent optical element having a first surface and a second surface,
wherein said first surface is shaped to reconfigure the surface of the cornea,

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening,

a passageway in fluid communication with said recessed chamber;

a suction device in fluid communication with said passageway; and

a retainer for mounting said reconfiguring device to a laser system.

39. (Canceled)

40. (Previously Presented) A lens system as recited in claim 38, wherein said skirt is cylindrical.

41. (Previously Presented) A lens system as recited in claim 38, wherein said skirt extends outwardly from the first surface and surrounds said first surface.

42. (Currently Amended) ~~A lens system as recited in claim 38,~~ A lens system for reconfiguring a cornea and holding the reconfigured cornea during a laser treatment, said system comprising:

a corneal surface reconfiguring device comprising

a transparent optical element having a first surface and a second surface,

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening, wherein said skirt has a sealing surface extending into said recessed chamber, wherein said sealing surface is formed of a soft, medical grade plastic,

a passageway in fluid communication with said recessed chamber;

a suction device in fluid communication with said passageway; and

a retainer for mounting said reconfiguring device to a laser system.

43. (Currently Amended) ~~A lens system as recited in claim 38,~~ A lens system for reconfiguring a cornea and holding the reconfigured cornea during a laser treatment, said system comprising:

a corneal surface reconfiguring device comprising

a transparent optical element having a first surface and a second surface,
wherein said first surface is substantially flat,

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening,

a passageway in fluid communication with said recessed chamber;

a suction device in fluid communication with said passageway; and

a retainer for mounting said reconfiguring device to a laser system.

44. (Previously Presented) A lens system as recited in claim 38, wherein said second surface is substantially flat.

45. (Previously Presented) A lens system as recited in claim 38, wherein said first surface is curved.

46. (Canceled)

47. (Previously Presented) A lens system as recited in claim 38, wherein said passageway is positioned substantially adjacent to said first surface.

48. (Previously Presented) A lens system as recited in claim 38, wherein said suction device generates suction thereby forming a partial vacuum in said recessed chamber.

49. (Currently Amended) ~~A lens system as recited in claim 38,~~ A lens system for reconfiguring a cornea and holding the reconfigured cornea during a laser treatment, said system comprising:

a corneal surface reconfiguring device comprising

a transparent optical element having a first surface and a second surface,

wherein said first surface is shaped to introduce less spherical aberration to said laser beam as said laser beam passes into the reconfigured cornea than is introduced into an identical laser beam passing into a cornea that is not reconfigured,

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening,

a passageway in fluid communication with said recessed chamber;

a suction device in fluid communication with said passageway; and

a retainer for mounting said reconfiguring device to a laser system.

50. (Previously Presented) A lens system as recited in claim 38, further comprising:

a laser source for producing a laser beam, said laser source positioned to pass said laser beam through said optical element.

51. (Currently Amended) ~~A lens system as recited in claim 38,~~ A lens system for reconfiguring a cornea and holding the reconfigured cornea during a laser treatment, said system comprising:

a corneal surface reconfiguring device comprising

a transparent optical element having a first surface and a second surface,

wherein said second surface and first surface are substantially parallel,

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening,

a passageway in fluid communication with said recessed chamber;

a suction device in fluid communication with said passageway; and

a retainer for mounting said reconfiguring device to a laser system.

52. (Currently Amended) ~~A lens system as recited in claim 38, further comprising~~ A lens system for reconfiguring a cornea and holding the reconfigured cornea during a laser treatment, said system comprising:

a corneal surface reconfiguring device comprising

a transparent optical element having a first surface and a second surface,

wherein said first surface is substantially flat,

a skirt adjoining said optical element thereby forming a recessed chamber around said first surface, said recessed chamber having an opening,

a passageway in fluid communication with said recessed chamber,

a skirt extension connected to said skirt;

a suction device in fluid communication with said passageway; and

a retainer for mounting said reconfiguring device to a laser system.

53. (Previously Presented) A lens system as recited in claim 52, wherein said skirt extension has a sealing surface with a concave curvature.

54. (Previously Presented) A lens system as recited in claim 38, further comprising a tube connecting said suction device and said passageway in fluid communication.

55. (Previously Presented) A lens system as recited in claim 38, wherein said suction device is a syringe.

56. (Previously Presented) A lens system as recited in claim 38, wherein said suction device is a vacuum pump.